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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,058	02/10/2004	Young-Chan Kim	104-R001	1526
38209 7590 02/07/2008 STANZIONE & KIM, LLP 919 18TH STREET, N.W. SUITE 440 WASHINGTON, DC 20006			EXAMINER YANG, RYAN R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	Application No. 10/775,058	Applicant(s) KIM, YOUNG-CHAN	
	Examiner Ryan R. Yang	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/22/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20,22-24,26-32,34,35,40,41,47,49,52-61,63,64,66,67 and 69-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19 is/are allowed.
- 6) ☒ Claim(s) 20,22-24,26-32,34,35,40,41,47,49,52-61,63,64,66,67 and 69-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____. |
|---|--|

DETAILED ACTION

(Reissue Applications)

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. This action is responsive to communications: arguments, filed on 1/22/2008.
This action is non-final.
3. Claims 1-20, 22-24, 26-32, 34-35, 40, 41, 47, 49, 52-61, 63, 64, 66, 67, 69-72 are pending in this application. Claims 1, 5, 13, 20, 34-36, 40, 47, 49, 52, 55, 57, 59, 71 and 72 are independent claims.

This application is a reissue application of Application No. 09/412,745 filed 10/5/1999, which is now Patent No. 6,346,972, which has Foreign Priority dated 5/26/1999.

4. The present title of the invention is "Video display apparatus with on-screen display pivoting function" as filed originally.

Specification

5. Claim 24 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 24 has same limitation as a portion of the claim 20 – "mode signal is generated in accordance with a user input indicating the rotated state of the screen body".

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 20, 22-24, 26-32, 34, 40, 41, 47, 49, 52-61, 63, 64, 66, 67 and 69-72 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claim 20 and 35, limitation “generating a mode signal indicating a rotated state of the screen body according to manipulation of a key to indicate the rotated state of the screen body” has no support from the specification.

The claim 34 limitation “receiving an externally input video signal having a second image; displaying the second image; modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated, according to a key manipulation to indicate the position of the rotatable screen; and displaying the first image that corresponds to the modified OSD data on the second image displayed on the rotatable screen” has no support from the specification.

The claim 35, limitation "generating a mode signal indicating a rotated state of the screen body according to manipulation of a key to indicate a position of the screen body" has no support from the specification.

Claim 40 has similar limitations as claim 34, and is rejected for the same reason as claim 34.

The claim 47 limitation "receiving a selection of a screen function key corresponding to the operational state of the screen body before displaying the OSD on the screen body" is not disclosed in the specifications. It is not supported in the section (column 6, line 1-15) indicated by the application, and there is no indication in the specification of what an "operation state" is.

Claim 49 has similar limitations as claim 47, and is rejected for the same reason as claim 47.

The claims 52, 57 and 59, limitation "a control unit to generate a mode signal indicating a rotated state of the display unit according to a key manipulation to indicate the rotated state of the display unit" has no support from the specification.

The claim 55 limitation "generating a mode signal indicating a rotated state of the display unit according to manipulation of a function key to indicate the rotated state of the display unit" has no support from the specification.

The claim 71 limitation "generating a mode signal indicating a rotated state of the display unit in response to a key manipulation to indicate the rotated state of the screen body" has no support from the specification.

The claim 72 limitation “a display unit to display a picture of externally input color component video signals on the screen body and to display an OSD image simultaneously on the displayed picture” has no support from the specification.

All the dependent claims are rejected for the same reasons as their respective parent claims.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 34-35, 61 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Kishimoto et al. (5,134,390).

As per Claim 34, Kishimoto et al., hereinafter Kishimoto, discloses a method of displaying a first image including an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body, the method comprising:

receiving an externally input video signal having a second image (“An image input unit 4, e.g., an image scanner, reads image information on a medium in the form of binary signals”, column 3, line 30-32, where the image scanner receives image from external);

displaying the second image (Figure 1, item 11);

modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated, according to a key manipulation to indicate the position of the rotatable screen (Figure 6, where the guidance information 62 is modified (66 or 69) to remain in perspective with respect to

the rotated screen; and since the OSD 66 and 69 are at different position in relation to the pictures image 6 and 65, they inherently indicate a rotated screen; and FIG. 1, where item 2 can manipulate display mode; "an operator can make the display 11 to rotate upon manipulation of the keyboard 2 at any time the operator desire", column 4, line 64- column 5, line 4); and

displaying the first image that corresponds to the modified OSD data on the second image displayed on rotatable screen (Figure 1, item 11 and Figure 6 is a modified first image on a second image).

10. As per Claim 35, Kishimoto discloses a video display apparatus having a screen body to display an on- screen display (OSD) image, the video display apparatus comprising:

a converter to receive externally inputted video signals having a picture ("An image display control unit 8 controls the display of image data on a display 11, e.g., to determine the display position, magnification and display format of image data", column 3, line 42-45);

a controller to generate a mode signal indicating a rotated state of the screen body according to a key manipulation to indicate a position of the screen body (Figure 1, item 9; "The end position detection circuit 903 supplies display rotary position information 903 to the main control unit ... in accordance with the position detection signals 117a and 118a supplied from the rotary position detection switches 117 and 118", column 5, line 21-27; and since the OSD 66 and 69 are at different position in relation to the pictures image 6 and 65, they inherently indicate a rotated screen; and

FIG. 1, where item 2 can manipulate display mode; "an operator can make the display 11 to rotate upon manipulation of the keyboard 2 at any time the operator desire", column 4, line 64- column 5, line 4); and

a circuit unit to display the picture of the externally inputted video signals on the screen body and to display the OSD image containing information about operation of the screen body at a rotated position in accordance with the mode signal on the displayed picture (Figure 7 is a circuit unit; Figure 6 shows rotated states; "guidance information 62, e.g., for function keys, is displayed on the display screen 63 as the guidance information 66 and on the display screen 67 as the guidance information 69", column 5, line 66- column 6, line 1, where the guidance is considered the information as claimed).

11. As per claim 61, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, and further discloses wherein the displaying of the first image that corresponds to the modified OSD data on the second image displayed on the rotatable screen comprises displaying the first image in a center of the rotatable screen ("FIG. 6, an image 65 of the image data is displayed on the screen at the same position, while the display 11 physically rotated by 90 degrees", column 5, line 57-59, for the image to remain at the same position after rotation, the image is inherently at the center of the display).

12. As per claim 67, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, supra, and further discloses the first image including the OSD indicates screen viewing settings comprising at least one of a brightness of a screen

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picture affecting the displayed second image and a size of the screen picture affecting the displayed second image ("The character data are superposed on the image 65 after being converted to a predetermined position and magnification factor, in according with a display mode defining the shape and dimension of a display area", column 6, line 2-6).

Claim Rejections - 35 USC § 103

13. Claims 20, 40, 41, 52-53, 55-56, 63, 69, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,949,504) and further in view of Kishimoto et al. (5,134,390).

14. As per Claim 20, Kim discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body, the method comprising:

generating a mode signal indicating a rotated state of the screen body according to manipulation of a key to indicate the rotated state of the screen body (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42; and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3); and

displaying a picture of externally inputted color component video signals on the screen body and displaying the OSD image on the displayed picture at a rotated position in accordance with the mode signal ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and

the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in accordance to the mode signal, however, this is known in the art as taught by Kishimoto et al., hereinafter Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69 and column 4, line 54- column 5, line 4).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

15. As per Claim **40**, Kim discloses a method of displaying a first image including an on-screen display (OSD) color component video signal in a video display apparatus having a rotatable screen, the method comprising:

receiving an external color component video signal having a second image ("a camera signal processor 10 which captures an image of an object and outputs a corresponding composite video signal", column 3, line 25-27, where the captured image is an external image; and "The camera signal processor 10 includes a digital-to-analog

(D/A) converter 15 for converting the output signal ... and a mixer 16 for mixing the separated luminance signal Y and color signal C to output a composite video signal", column 2, line 36-40);

displaying the second image to the video display apparatus (Figure 1A, item 60 where the image is displayed);

modifying OSD data corresponding to the first image including the OSD color component video signal with respect to an angle of rotation of the screen when the screen is rotated, according to manipulation of a key to indicate the angle of rotation ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3, and (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42)); and

displaying the first image corresponding to the modified OSD data on the second image displayed on the rotated screen ("The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the

mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

16. As per claim **41**, Kim demonstrated all the elements as disclosed in the rejected claim 40.

Kim discloses a rotatable display. It is noted that Kim does not explicitly disclose the angle of rotation of the screen is obtained by rotating the screen in the clockwise or counterclockwise directions, however, this is known in the art as taught by Kishimoto. Kishimoto discloses and OSD screen that can be rotated in either directions (Figure 2 where the rotary shaft 115a can be rotated clockwise or counterclockwise).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Kim because Kim discloses a method of displaying an OSD image and Sakamoto discloses the screen could be rotated in order for convenient viewing.

17. As per claim **52**, Kim discloses a video display apparatus having a rotatable display unit, the video display apparatus comprising:

an external signal unit to receive an external image signal ((“a camera signal processor 10 which captures an image of an object and outputs a corresponding

composite video signal", column 3, line 25-27, where the captured image is an external image);

an OSD generator to generate an internal OSD image signal (Figure 1A, item 70),

a control unit to generate a mode signal indicating a rotated state of the display unit according to a key manipulation to indicate the rotated state of the display unit (Figure 1B, item 42; and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3); and

a circuit unit to drive the display unit to display the external image signal and to drive the display unit to display the internal OSD image signal at a rotated position in accordance with the mode signal generated by the control unit (Figure 1A, item 50).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotated in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

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18. As per claim **53**, Kim demonstrated all the elements as disclosed in the rejected claim 52.

Kim discloses an OSD display method. It is noted that Kim does not explicitly disclose one or more function keys to change operation settings thereof by indicating the rotated state of the display unit such that the circuit unit drives the display unit to display the internal OSD image signal in response to a selection of the one or more function keys, however, this is known in the art as taught by Kishimoto. Kishimoto discloses that function keys are used to change the operation of the apparatus (Figure 12; “it is checked if the operator has instructed to rotate the display device 112 by means of the keyboard 2 or a predetermined switch (not shown) (step1201)”, column 8, line 20-22; and “The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character”, column 4, line 67- column 5, line 3).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of display OSD and Kishimoto discloses the function keys could be used to change the operation setting of the display in order to quickly made to change of the display.

19. As per claim **56**, the claim limitation is similar to claim 53, therefore is similarly rejected as claim 53.

20. As per claim **63**, Kim demonstrated all the elements as disclosed in the rejected claim 40, and further discloses the limitation similar to claim 61, therefore it is similarly rejected as claim 61.

21. As per claim **69**, Kim demonstrated all the elements as disclosed in the rejected claim 40, supra, and further discloses the limitation similar to claim 67, therefore is similarly rejected as claim 67.

22. As per claim **55**, it is a method of controlling a video display with the claim limitation similar to claim 52, therefore it is similarly rejected as claim 52.

23. As per Claim **71**, Kim discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body supporting the screen, the method comprising:

generating a mode signal indicating a rotated state of the screen body in response to a key manipulation to indicate the rotated state of the screen body (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42; and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3); and

displaying a picture of externally inputted color component video signals on the screen body and displaying the OSD image simultaneously on the displayed picture ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15, and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD

portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

24. As per Claim **72**, Kim discloses a method of displaying an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body supporting the screen, the method comprising:

generating a mode signal indicating a rotated state of the screen body (Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42); and

displaying a picture of externally inputted color component video signals on the screen body and displaying the OSD image simultaneously on the displayed picture ("The mixer 16 mixes the signals which are output from the D/A converter 15 after being separated into the luminance signal Y and the color signals C in the D/A converter 15,

and outputs a composite video signals to the LCD monitor 51", column 3, line 66- column 4, line 3, and "The main controller 41 outputs the OSD control signal to the OSD portion 70 so that the LCD monitor display viewing angle control amount is displayed as the OSD character", column 4, line 67- column 5, line 3).

Kim discloses a method of OSD display. It is noted that Kim does not explicitly disclose the OSD image is rotated with respect to the screen body in response to the mode signal, however, this is known in the art as taught by Kishimoto. Kishimoto discloses a rotatable screen in which the OSD is rotate in accordance with rotated display mode (Figure 6, item 66 and 69).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses a method of OSD display and Kishimoto discloses the OSD display can be rotated in accordance to a rotated display mode in order to maintain a proper view for a viewer.

25. Claim **34** is rejected under 35 U.S.C. 103(a) as unpatentable over Buxton et al. (6,115,025) and further in view of Kim (5,949,504).

As per Claim 34, Buxton et al., hereinafter Buxton, discloses a method of displaying a first image including an on-screen display (OSD) in a video display apparatus having a screen and a rotatable screen body, the method comprising:

receiving an externally input video signal having a second image (Figure 3a, item 34 is a graphical object inputted from computer 10);
displaying the second image (Figure 3a, item 34);

modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated, according to a key manipulation to indicate the position of the rotatable screen (Figure 3b, item 30 where the user interface 30 is modified to be fixed in relation to a view point 36 even though the display 32 is rotated); and

displaying the first image that corresponds to the modified OSD data on the second image displayed on rotatable screen (Figure 3b).

Buxton discloses a method of displaying image on a rotatable screen. It is noted Buxton does not explicitly disclose the display mode could be modified by a key manipulation to indicate the position of the rotatable screen, however, this is known in the art as taught by Kim. Kim discloses an image display method in which the display mode could be modified by a key control (FIG. 1, where item 2 can manipulate display mode; "an operator can make the display 11 to rotate upon manipulation of the keyboard 2 at any time the operator desire", column 4, line 64- column 5, line 4; and since the OSD 66 and 69 are at different position in relation to the pictures image 6 and 65, they inherently indicate a rotated screen).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kim into Buxton because Buxton discloses a method to display image and Kim discloses the display mode can be controlled by key input in order provide flexibility for display.

26. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being obvious over Kim (5,949,504) in view of Kishimoto et al. (5,134,390).

27. As per Claim **22**, Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claim 20, and Kishimoto further discloses wherein the user input is made by a direct key selection (“an operator can make the display 11 to rotate upon manipulation of the keyboard 2 at any time the operator desire”, column 4, line 64- column 5, line 4).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses an OSD display and Kishimoto discloses the rotated state of the screen body could be directly key input in order to provide more convenience to control the image.

28. As per Claim **23**, Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claim 20, and Kishimoto further discloses rotating the OSD in accordance with the mode signal (“an operator can make the display 11 to rotate upon manipulation of the keyboard 2 at any time the operator desire”, column 4, line 64- column 5, line 4, where the signal to rotate is the mode signal).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Kishimoto into Kim because Kim discloses an OSD display and Kishimoto discloses the OSD could be rotated according to the mode signal in order to maintain a proper viewing.

29. As per Claim **24**, Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claim 23, and Kim further discloses the mode signal is generated in accordance with a user input indicating the rotated state of the screen body (since the claim limitation is similar to part of claim 21, it is similarly rejected as claim 21).

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30. Claims 26-29, 32 and 66 are rejected under 35 U.S.C. 103(a) as being obvious over Kim (5,949,504) in view of Kishimoto et al. (5,134,390) and further in view of Register (5,661,632).

31. As per Claim **26**, Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claim 23

Kim and Kishimoto discloses a method of OSD display. It is noted that Kim and Kishimoto do not explicitly disclose the OSD image rotating operation comprises reordering read sequence of the OSD data which is stored in a data memory. However, this is known in the art as taught by Register. Register discloses an image display method where the read sequence is reordered when rotated ("The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees", column 5, line 13-16).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim and Kishimoto because Kim and Kishimoto disclose an OSD display and Register discloses the OSD data could be reordered in order to maintain proper viewing.

32. As per Claim **27**, Kim, Kishimoto and Register demonstrated all the elements as disclosed in the rejected claim 26, and Register further discloses the reordering operation is made to form characters and/or symbols represented by the OSD data in a perpendicularly rotated manner (texts or symbols that are perpendicularly rotated in Figure 4 and Figure 5, items 54a and 54b).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim and Kishimoto because Kim and Kishimoto disclose a an OSD display and Register discloses the character or symbol represented by the OSD data could be perpendicularly rotated in order for it to be easily seen.

33. As per Claim **28**, Kim, Kishimoto and Register demonstrated all the elements as disclosed in the rejected claim 23, and Register further discloses reordering read addresses of the OSD data which is stored in a data memory ("The subroutine then arranges the data patterns within the memory 104 such that the video controller 106 displays the data on the display screen 108 in an orientation that is rotated ninety degrees", column 5, line 13-16).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching Register into Kim and Kishimoto because Kim and Kishimoto disclose an OSD display and Register discloses the OSD data could be stored in order for quick re-display.

34. As per Claim **29**, Kim, Kishimoto and Register demonstrated all the elements as disclosed in the rejected claim 28, and since the claim limitation is similar to claim 27, it is similarly rejected as claim 27.

35. As per Claim **32**, Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claim 20.

Kim and Kishimoto disclose a method OSD display. It is noted that Kim and Kishimoto do not explicitly disclose activating a key located on the rotatable screen

body, however, this is known in the art as taught by Register. Register discloses a key located on the rotatable screen body (Figure 4, key 34).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching Register into Kim and Kishimoto because Kim and Kishimoto disclose an OSD display and Register discloses the a key located on the rotatable screen body in order for convenient input.

36. As per claims 66, Kim demonstrated all the elements as disclosed in the rejected claim 40, *supra*.

Kim discloses a rotatable display. It is noted that Kim does not explicitly disclose that the first image is a control window, however, this is known in the art as taught by Register. Register discloses a rotatable display in which an image can be used for control input ("Different command text and/or graphics "C" is appropriately displayed in each of the command icons 54a", column 3, line 41-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses a rotatable display and Register discloses the displayed graphical icons in the window can be control input in order easily change the display setting.

37. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,949,504) and Kishimoto et al. and further in view of Sakamoto et al. (5,329,289).

38. As per Claim 30, Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claim 20.

Kim and Kishimoto disclose an OSD display screen. It is noted that Kim and Kishimoto do not explicitly disclose reading OSD data contained in the OSD image as first OSD data and modifying the first OSD data as second OSD data according to the generated mode signal, however, this is known in the art as taught by Sakamoto et al., hereinafter Sakamoto. Sakamoto discloses

reading OSD data contained in the OSD image as first OSD data ("data on an onscreen display stored in the display status storing region in the RAM 11b is read through the CPU 10 in the initialization routine stored in the ROM 11a (S2)", column 4, line 52-55); and

modifying the first OSD data as second OSD data according to the generated mode signal ("If it is recognized as the vertically elongated screen, a command is accordingly sent through the CPU 10 to the display controller 16 to set a vertically elongated on-screen format to the display unit 3 (S4)", column 4, line 58-62).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Kim and Kishimoto because Kim and Kishimoto disclose a method of display dual mode image and Sakamoto discloses the generated image could be modified in order for it to be suitably displayed in different modes.

39. As per Claim **31**, Kim, Kishimoto and Sakamoto demonstrated all the elements as disclosed in the rejected claim 30, and Sakamoto further discloses the modifying operation comprises:

storing a write address of the first OSD data in a predetermined format that corresponds to the rotated position of the screen body ("the RAM 38 is a memory which

can write/read upon occasion and which has a function to temporarily store input data “, column 8, line 40-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teach of Sakamoto into Kim and Kishimoto because Kim and Kishimoto disclose a method of displaying an OSD image and Sakamoto discloses the generated image could be modified in order for it to be suitably displayed in different mode.

40. Claims 54 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim and Kishimoto as applied to claim 52 above, and further in view of Register.

41. As per claims **54** and **66** Kim and Kishimoto demonstrated all the elements as disclosed in the rejected claims 53 and 40, supra, respectively, and Kim further discloses a screen (Figure 3B, item 60).

Kim and Kishimoto disclose a rotatable display. It is noted that Kim and Kishimoto do not explicitly disclose “a rotatable screen body surrounding the screen having the one or more function keys installed thereon”, however, this is known in the art as taught by Register. Register discloses a rotatable display with function keys surrounding the screen (Figure 1, items 34a and 34b).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kim because Kim discloses a rotatable display and Register discloses the function keys can be placed around the display screen in order for easy access.

42. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto as applied to claim 34 above, and further in view of Register.

As per claim **64**, Kishimoto demonstrated all the elements as disclosed in the rejected claim 34, *supra*.

Kishimoto discloses a rotatable display. It is noted that Kishimoto does not explicitly disclose that the first image is a control window, however, this is known in the art as taught by Register. Register discloses a rotatable display in which an image can be used for control input ("Different command text and/or graphics "C" is appropriately displayed in each of the command icons 54a", column 3, line 41-42).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Register into Kishimoto because Kishimoto discloses a rotatable display and Register discloses the displayed graphical icons in the window can be control input in order easily change the display setting.

43. Claims 57-60 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,949,504).

As per claim 57, Kim discloses a video display apparatus having a rotatable display unit to display an image of an external color component video signal, the video display apparatus comprising:

an OSD generator to generate an OSD color component video signal separate (Figure 1B, item 41 generates OSD image signal);

a control unit to generate a mode signal indicating a rotated state of the display unit according to manipulation of a function key to indicate the rotated state of the screen body (Figure 1A, "The information of the position and direction of the LCD panel according to the rotation of the display viewing angle control motor 51 is fed back to the

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main controller 41", column 4, line 50-52; Figure 1B, "main controller 41 judges whether a selected key for selecting an LCD monitor display viewing angle control mode is input via the mode selector 42", column 3, line 40-42; and since the OSD 66 and 69 are at different position in relation to the pictures image 6 and 65, they inherently indicate a rotated screen); and

a circuit unit to drive the display unit to display the OSD color component video signal on the image of the external color component video signal at a rotated position in accordance with the mode signal generated by the control unit (Figure 1A and Figure 1B).

As for the OSD color signal that is colored, since the generated video image is colored, it would have been obvious to one of ordinary skill in the art (Official Notice) to also make the OSD display colored in order to commensurate the images.

44. As per claim **58**, Kim demonstrated all the elements as disclosed in the rejected claim 57, and further discloses:

an external signal unit to receive an external image signal such that the circuit unit further drives the display unit to display the external image signal with the OSD image signal (Figure 1A and Figure 1B, item 10 is an external signal unit, and item 41 provides internal OSD image signal).

45. As per claim 59, Kim discloses a method of controlling a video display apparatus having a rotatable display unit, the method comprising steps similar to claim 57 limitations, therefore is similarly rejected as claim 57.

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46. As per claim 60, Kim demonstrated all the elements as disclosed in the rejected claim 59, and further discloses the steps similar to claim 58 limitations, therefore is similarly rejected as claim 58.

47. As per claim 70, Kim demonstrated all the elements as disclosed in the rejected claim 57.

As for the rotatable display unit display unit displays the OSD image on the screen according to manipulation of another key, since it is notoriously well known in the art (Official Notice) that a plurality of keys are used to set control a plurality of display mode, it would have been obvious to one of ordinary skill in the art at the time the invention was made in order to easily input choices.

Allowable Subject Matter

48. Claims 1-19 are allowed.

Response to Arguments

49. Applicant's arguments filed 1/22/2008 have been fully considered but they are not persuasive.

The amended claims 47, 49, 57 and 59 limitations have not overcome the 112 rejection. They are not fully supported by the specification. All the claims are not fully supported by the specification.

As per claims 20, 22-23, 30-31, 40-41, 47, 49, 52-53, 55-56, 71 and 72, applicant alleges Kim and Kishimoto do not teach "generating a mode signal indicating a rotated state of the screen body according to manipulation of a key to indicate the rotated state

of the screen body", or "displaying the OSD image on the displayed picture at a rotated position in accordance with the mode signal". In reply, Examiner contends Kim and Kishimoto combined teach the claimed limitations; the motivation is to maintain proper view of the image.

As per claims 24, 26-29, 32 and 54, Kim, Kishimoto and Register combined teach the limitations; the motivations are stated at the end of the each rejections.

As per claims 34, 40-41, 61, 63-64, 66, 67 and 69, applicant alleges that Kishimoto does not teach "modifying OSD data corresponding to the first image including the OSD with respect to a position of the rotatable screen when the screen is rotated, according to a key manipulation to indicate the position of the rotatable screen". In reply, Examiner contends Kishimoto discloses the limitations are rejected above.

As per claim 34, applicant alleges neither Buxton nor Kim teach the claim limitations. In reply, Examiner consider Buxton and Kim combined teach the limitations and motivation is to provide flexibility in display.

As per claim 35, Examiner maintains Kishimoto met the claim limitations as rejected.

As per claims 57-60 and 70, Examiner considers Kim met the limitations as stated in the rejections.

Conclusion

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan R. Yang whose telephone number is (571) 272-7666. The examiner can normally be reached on M-F 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ryan Yang/
Primary Examiner
February 5, 2008